



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1140910
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____



1140910

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR. _____ Producing Method:
 Flowing Pumping Gas Lift Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd.
Hays KS 67601-9696

ATTN: Herb Deines

Warren #1

22 15s 18w Ellis,KS

Start Date: 2013.05.04 @ 13:22:00

End Date: 2013.05.04 @ 19:01:00

Job Ticket #: 53617 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.05.13 @ 14:12:58

TDI Inc. 22 15s 18w Ellis,KS Warren #1 DST # 1 Arbuckle 2013.05.04



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TDI Inc.
1310 Bison Rd.
Hays KS 67601-9696
ATTN: Herb Deines

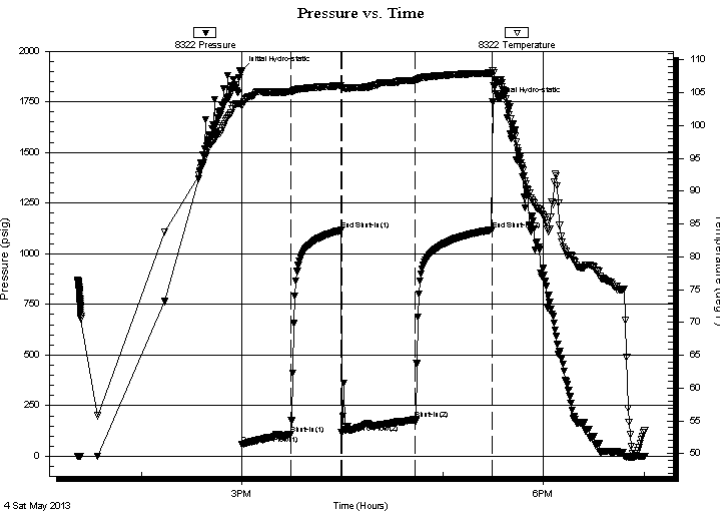
22 15s 18w Ellis,KS
Warren #1
Job Ticket: 53617 **DST#: 1**
Test Start: 2013.05.04 @ 13:22:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:00:10
Time Test Ended: 19:01:00
Interval: **3540.00 ft (KB) To 3620.00 ft (KB) (TVD)**
Total Depth: 3750.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor
Test Type: Conventional Straddle (Initial)
Tester: Jim Svaty
Unit No: 41
Reference Elevations: 2029.00 ft (KB)
2021.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8322 Outside
Press @ Run Depth: 181.12 psig @ 3609.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.05.04 End Date: 2013.05.04 Last Calib.: 2013.05.04
Start Time: 13:22:01 End Time: 19:00:20 Time On Btm: 2013.05.04 @ 14:59:50
Time Off Btm: 2013.05.04 @ 17:29:40

TEST COMMENT: 30-IFP- BOB in 19 min.
30-ISIP- No Blow
45-FFP- BOB in 22 1/2 min.
45-FSIP- Weak Surface Blow in 2 min. Died in 19 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1902.51	103.21	Initial Hydro-static
1	58.65	103.01	Open To Flow (1)
30	107.53	105.13	Shut-In(1)
60	1115.45	106.08	End Shut-In(1)
60	116.07	105.78	Open To Flow (2)
104	181.12	106.90	Shut-In(2)
150	1117.80	107.98	End Shut-In(2)
150	1748.73	108.40	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OCM 5% _m 95% _o	0.07
93.00	MCO 5% _o 95% _m	1.30
189.00	WMCO 10% _w 20% _m 70% _o	2.65
0.00	62 GIP	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI Inc.
1310 Bison Rd.
Hays KS 67601-9696
ATTN: Herb Deines

22 15s 18w Ellis,KS
Warren #1
Job Ticket: 53617 **DST#: 1**
Test Start: 2013.05.04 @ 13:22:00

Tool Information

Drill Pipe:	Length: 3532.00 ft	Diameter: 3.80 inches	Volume: 49.54 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 34000.00 lb
			<u>Total Volume: 49.54 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 32000.00 lb
Depth to Top Packer:	3540.00 ft			Final 33000.00 lb
Depth to Bottom Packer:	3620.00 ft			
Interval between Packers:	80.00 ft			
Tool Length:	230.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3525.00	
Hydraulic tool	5.00			3530.00	
Packer	5.00			3535.00	20.00 Bottom Of Top Packer
Packer	5.00			3540.00	
Stubb	1.00			3541.00	
Perforations	5.00			3546.00	
Change Over Sub	1.00			3547.00	
Blank Spacing	61.00			3608.00	
Change Over Sub	1.00			3609.00	
Recorder	0.00	6752	Inside	3609.00	
Recorder	0.00	8322	Outside	3609.00	
Perforations	7.00			3616.00	
Blank Off Sub	4.00			3620.00	80.00 Tool Interval
Packer	1.00			3621.00	
Stubb	1.00			3622.00	
Perforations	1.00			3623.00	
Recorder	0.00	8734	Below	3623.00	
Change Over Sub	1.00			3624.00	
Blank Spacing	126.00			3750.00	130.00 Bottom Packers & Anchor

Total Tool Length: 230.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc.
1310 Bison Rd.
Hays KS 67601-9696
ATTN: Herb Deines

22 15s 18w Ellis,KS
Warren #1
Job Ticket: 53617 **DST#: 1**
Test Start: 2013.05.04 @ 13:22:00

Mud and Cushion Information

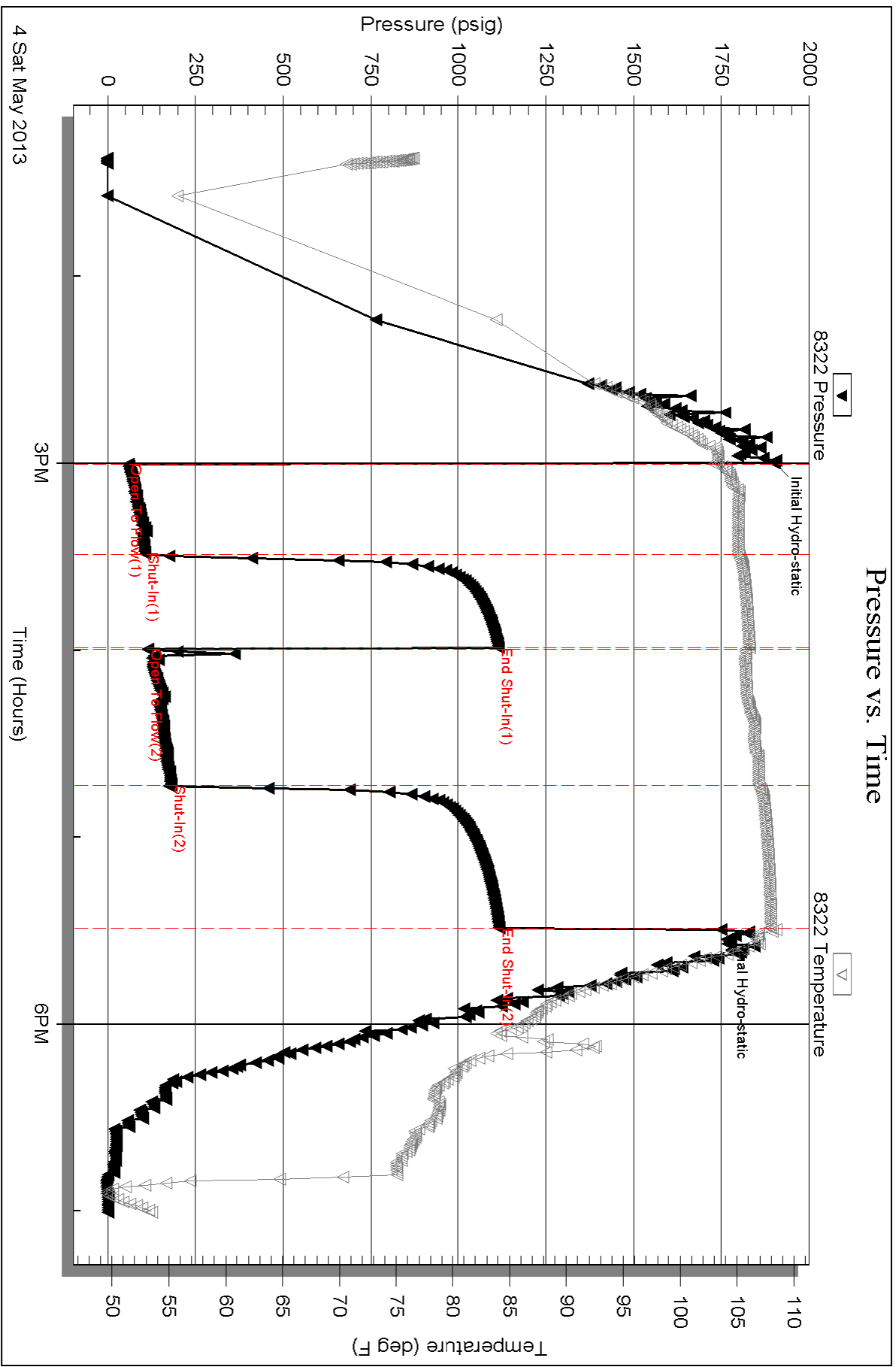
Mud Type: Gel Chem	Cushion Type:	Oil API: 31 deg API
Mud Weight: 10.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 59.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.79 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 5000.00 ppm		
Filter Cake: 2.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	OCM 5% _m 95% _o	0.070
93.00	MCO 5% _o 95% _m	1.305
189.00	WMCO 10% _w 20% _m 70% _o	2.651
0.00	62 GIP	0.000

Total Length: 287.00 ft Total Volume: 4.026 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

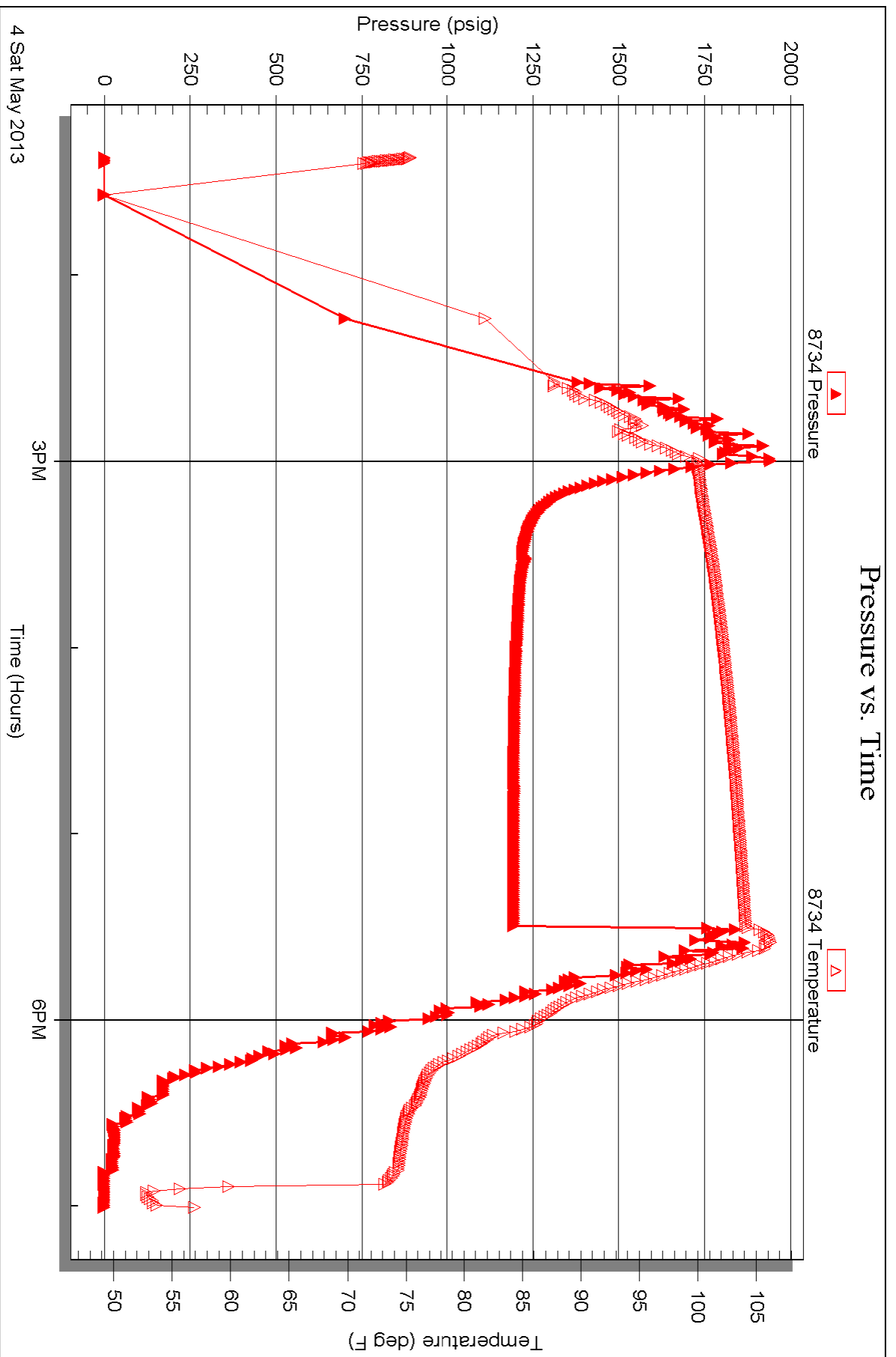


Serial #: 8734

Below (Straddling)

Warren #1

DST Test Number: 1



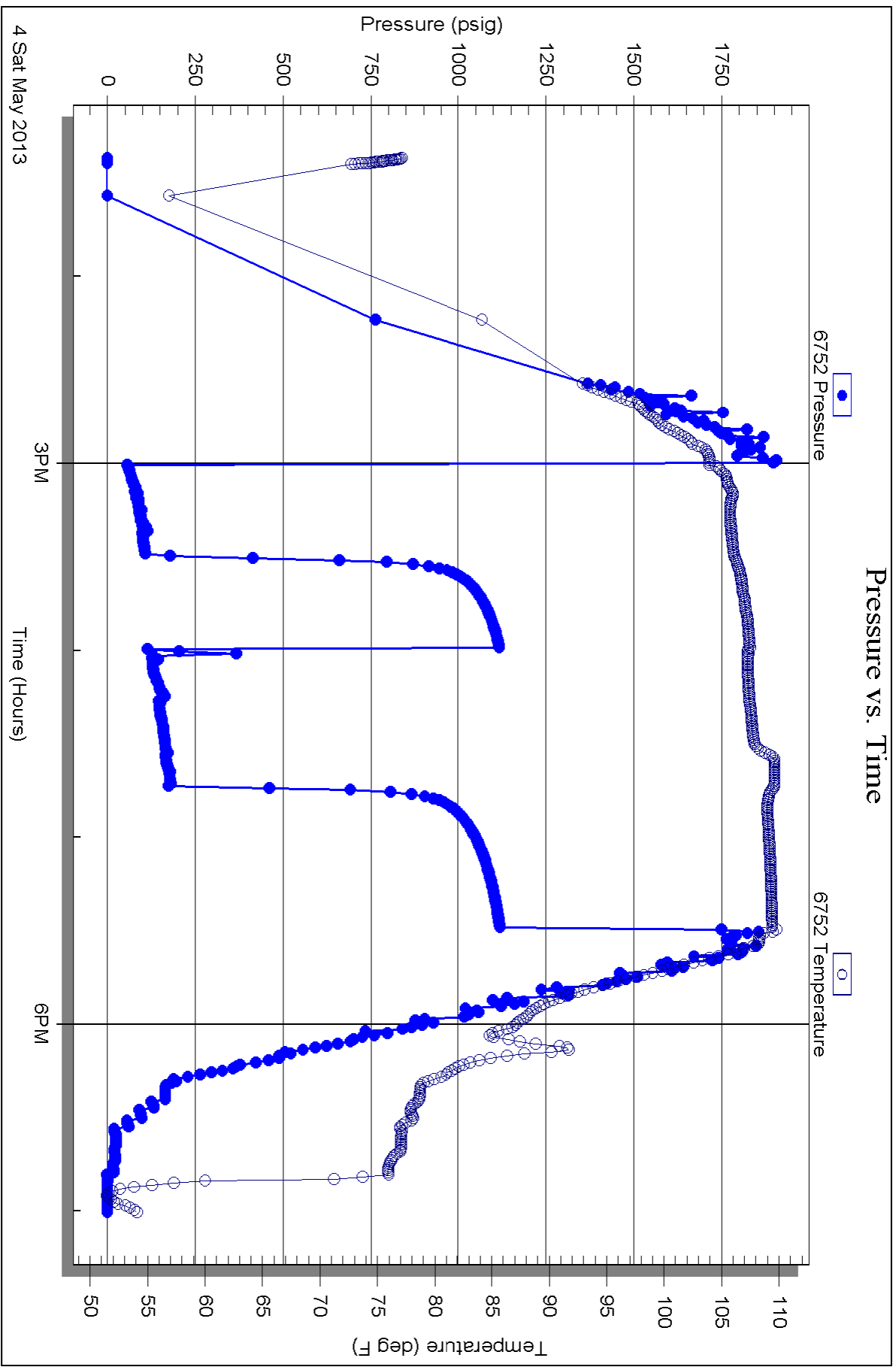
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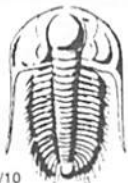
Inside

TDI Inc.

Warren #1

DST Test Number: 1





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53617

Well Name & No. Warren #1 Test No. 1 Date 5-4-13
 Company TDI Inc. Elevation 2029 KB 2021 GL
 Address 1310 Bison Rd. Hays Ks. 67601-9696
 Co. Rep / Geo. Herb Deines Rig Southwind #1
 Location: Sec. 22 Twp. 15^s Rge. 18^w Co. Ellis State Ks

Interval Tested 3540-3620 Zone Tested Arbuckle
 Anchor Length 80 - 130 T.P. Drill Pipe Run 3532 Mud Wt. 9.5
 Top Packer Depth 3540 Drill Collars Run 0 Vis 59
 Bottom Packer Depth 3620 Wt. Pipe Run 0 WL 7.8
 Total Depth 3750 Chlorides 5000 ppm System LCM 2

Blow Description IFP - BOB in 19 min.
ISIP - No Blow
FFP - BOB in 22 1/2 min.
FSIP - Weak Surface Blow in 2 min Died in 19 min.

Rec	Feet of	%gas	%oil	%water	%mud
5	OCM	95		5	
93	MCO	5		95	
189	WMCO	70	10	20	
-	62 DIP				

Rec Total 287 BHT 108 Gravity 31 API RW @ ° F Chlorides ppm

(A) Initial Hydrostatic 1902 Test 1150 T-On Location 10:56
 (B) First Initial Flow 58 Jars T-Started 13:22
 (C) First Final Flow 107 Safety Joint T-Open 15:00
 (D) Initial Shut-In 1115 Circ Sub T-Pulled 17:30
 (E) Second Initial Flow 116 Hourly Standby T-Out 19:01
 (F) Second Final Flow 181 Mileage 26 RT 40.30
 (G) Final Shut-In 1117 Sampler
 (H) Final Hydrostatic 1748 Straddle 600 Ruined Shale Packer

Initial Open 30 Shale Packer Ruined Packer
 Initial Shut-In 30 Extra Packer Extra Copies
 Final Flow 45 Extra Recorder Sub Total 0
 Final Shut-In 45 Day Standby Total 1790.30
 Accessibility MP/DST Disc't
 Sub Total 1790.30

Approved By _____ Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

OPERATOR

Company: TDI, INC
 Address: 1310 BISON ROAD
 HAYS, KANSAS 67601

Contact Geologist: TOM DENNING
 Contact Phone Nbr: 785-628-2593
 Well Name: WARREN # 1
 Location: E2 SW SE NE Sec 22-15s-18w
 Pool: INFIELD
 State: KANSAS

API: 15-051-26,501-00-00
 Field: SCHOENCHEN
 Country: USA



TDI, Inc.
 1310 BISON ROAD
 HAYS, KANSAS 67601
 (785) 628-2593

Scale 1:240 Imperial

Well Name: WARREN # 1
 Surface Location: E2 SW SE NE Sec 22-15s-18w
 Bottom Location:
 API: 15-051-26,501-00-00
 License Number: 4787
 Spud Date: 4/29/2013 Time: 1:15 PM
 Region: ELLIS COUNTY
 Drilling Completed: 5/4/2013 Time: 2:14 AM
 Surface Coordinates: 2310' FNL & 975' FEL
 Bottom Hole Coordinates:
 Ground Elevation: 2027.00ft
 K.B. Elevation: 2037.00ft
 Logged Interval: 2900.00ft To: 3750.00ft
 Total Depth: 3750.00ft
 Formation: ARBUCKLE
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: Latitude:
 N/S Co-ord: 2310' FNL
 E/W Co-ord: 975' FEL

LOGGED BY

Company: SOLUTIONS CONSULTING, INC.
 Address: 108 W 35TH
 HAYS, KS 67601

Phone Nbr: (785) 639-1337
 Logged By: Geologist Name: HERB DEINES

CONTRACTOR

Contractor: SOUTHWIND DRILLING, INC.
 Rig #: 1
 Rig Type: MUD ROTARY

Rig Type: MUD ROTARY
Spud Date: 4/29/2013
TD Date: 5/4/2013
Rig Release: 5/5/2013

Time: 1:15 PM
Time: 2:14 AM
Time: 6:30 AM

ELEVATIONS

K.B. Elevation: 2037.00ft
K.B. to Ground: 10.00ft

Ground Elevation: 2027.00ft

NOTES

RECOMMENDATION TO RUN PRODUCTION CASING BASED ON RESULTS OF DST # 1 AND FAVORABLE ARBUCKLE STRUCTURE.

OPEN HOLE LOGGING BY PIONEER ENERGY SERVICES: DUAL INDUCTION LOG, DUAL COMPENSATED POROSITY LOG, MICRORESISTIVITY LOG

DRILL STEM TESTING BY TRILOBITE TESTING INC: ONE (1) STRADDLE TEST

FORMATION TOPS SUMMARY AND CHRONOLOGY OF DAILY ACTIVITY

WARREN # 1

2310' FNL & 975' FEL, NE/4

Sec. 22-15s-18w

2027' GL 2037' KB

WILLARD # 1

480'FNL & 2190'FEL

Sec 22-15s-18w

Reference Well

<u>FORMATION</u>	<u>SAMPLE TOPS</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>
Anhydrite	1185+ 852	1190+ 847	+ 844
B-Anhydrite	1225+ 812	1225+ 812	+ 808
Topeka	3007- 970	3005- 968	- 971
Heebner Shale	3272-1235	3271-1234	-1233
Toronto	3292-1255	3292-1255	-1253
LKC	3322-1285	3322-1285	-1283
BKC	3540-1503	3544-1507	-1506
Marmaton	3590-1553	3579-1542	-1542
Arbuckle	3602-1565	3610-1573	-1558
RTD	3750-1713		
LTD		3752-1715	

SUMMARY OF DAILY ACTIVITY

4-29-13 RU, spud 1:15 PM, set 8 5/8" surface pipe to 222.18' w/ 150 sxs common, 2%Gel, 3% CC , plug down 6:15 PM, WOC 8hrs, slope 1 degree


4-30-13 520', drilling

5-01-13 1880,'drilling,

5-02-13 2580'. drilling. displaced 2641' to 2668'

- 5-03-13 3300', drilling
- 5-04-13 3750', RTD 2:14 am at 3750', short trip, CCH 1 ½ hrs, TOWP, slope ½ degree, logs, straddle DST # 1 3540'- 3620' Arbuckle, TIWB, CCH, LDDP
- 5-05-13 3750', finish running production casing and cementing, plug down 6:30 am, RD

DST # 1 STRADDLE TEST ARBUCKLE

 <p>TRILOBITE TESTING, INC.</p>	DRILL STEM TEST REPORT		
	TDI Inc. 1310 Bison Rd. Hays KS 67601-9696 ATTN: Herb Deines	22 15s 18w Ellis Warren # 1 Job Ticket: 53617 DST#: 1 Test Start: 2013.05.04 @ 13:22:00	

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: 2029.00 ft (KB)
 Time Tool Opened: 15:00:10
 Time Test Ended: 19:01:00

Test Type: Conventional Straddle (Initial)
 Tester: Jim Svaty
 Unit No: 41

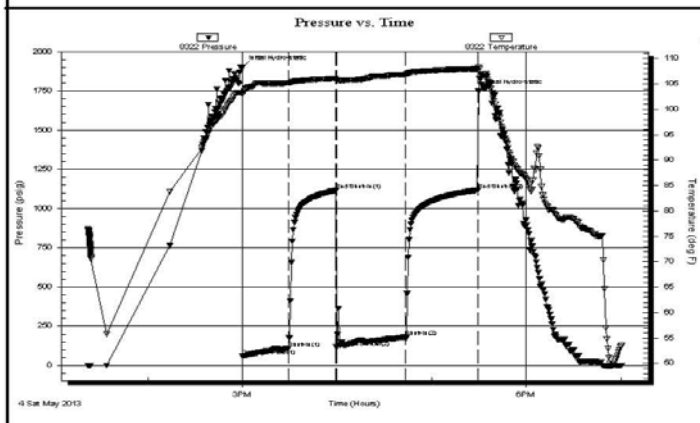
Interval: **3540.00 ft (KB) To 3620.00 ft (KB) (TVD)**
 Total Depth: 3750.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 2029.00 ft (KB)
 2021.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8322 Outside

Press@RunDepth: 181.12 psig @ 3609.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2013.05.04	End Date: 2013.05.04
Start Time: 13:22:01	End Time: 19:00:20
	Last Calib.: 2013.05.04
	Time On Btm: 2013.05.04 @ 14:59:50
	Time Off Btm: 2013.05.04 @ 17:29:40

TEST COMMENT: 30-IFP- BOB in 19 min.
 30-ISIP- No Blow
 45-FFP- BOB in 22 1/2 min.
 45-FSIP- Weak Surface Blow in 2 min. Died in 19 min.



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1902.51	103.21	Initial Hydro-static
1	58.65	103.01	Open To Flow (1)
30	107.53	105.13	Shut-In(1)
60	1115.45	106.08	End Shut-In(1)
60	116.07	105.78	Open To Flow (2)
104	181.12	106.90	Shut-In(2)
150	1117.80	107.98	End Shut-In(2)
150	1748.73	108.40	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
5.00	OCM 5% m 95% o	0.07
93.00	MCO 5% o 95% m	1.30
189.00	VMCO 10% w 20% m 70% o	2.65
0.00	62 GIP	0.00

Gas Rates			
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

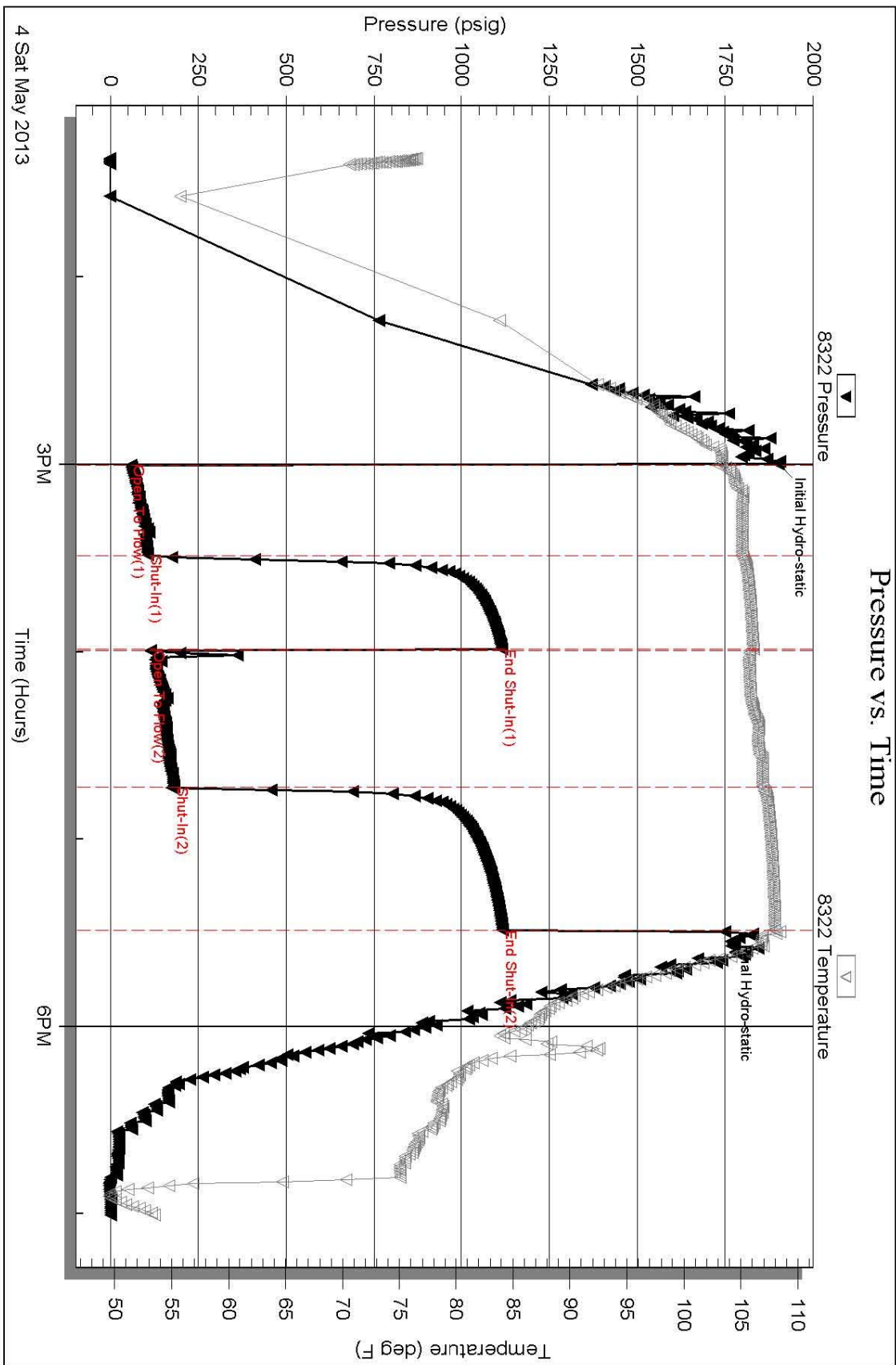
DST # 1 EXPANDED CHART

Serial #: 8322

Outside TDI Inc.

Warren # 1

DST Test Number: 1








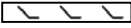






Trilobite Testing, Inc

Ref. No: 53617

Printed: 2013.05.05 @ 03:23:18

ROCK TYPES

 Cht vari	 Lmst fw<7	 shale, gry	 Shcol
 Clystgy	 Lmst fw>7	 Carbon Sh	 Dol Lime
 Dolprim	 shale, grn	 shale, red	 Lscong1

ACCESSORIES

MINERAL

- ▲ Chert, dark
- P Pyrite
- Sandy
- Varicolored chert
- △ Chert White

FOSSIL

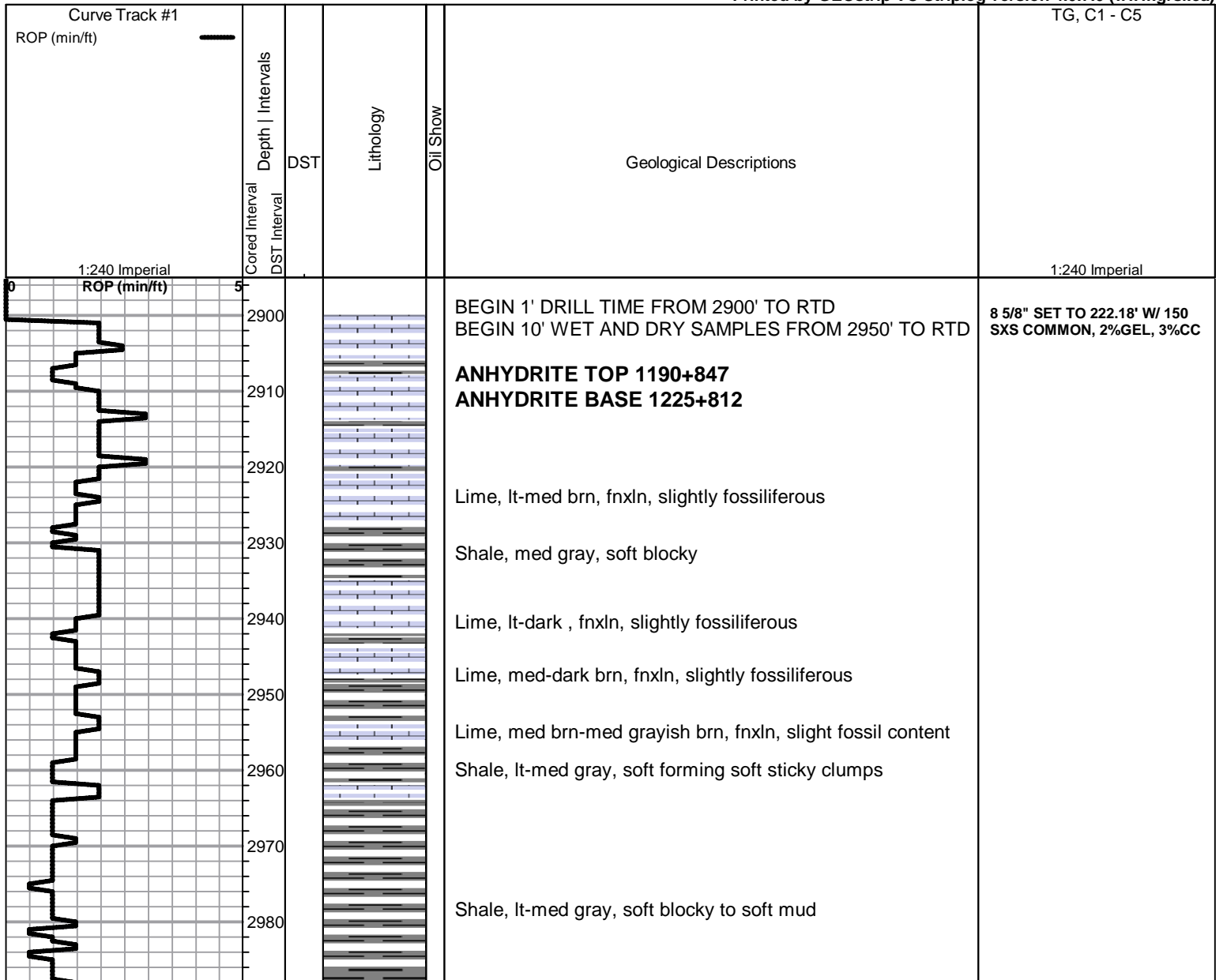
- Oolite
- ⊕ Oomoldic

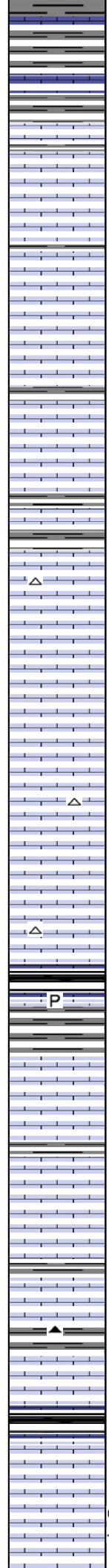
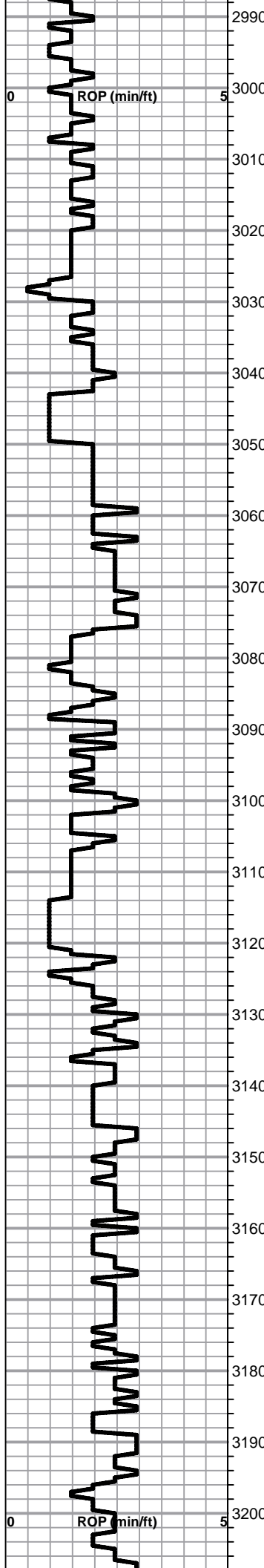
OTHER SYMBOLS

DST

- DST Int
- DST alt
- Core

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)





Lime, med-dark brn, fnxln, fossiliferous
 Shale, lt-med gray, soft mud to soft blocky

TOPEKA 3005-968

Lime, lt-med brn, fnxln

Lime, lt-med brn-grayish brn, fnxln

Lime, lt-med brn-grayish brn, fnxln, soft on crush

Lime, lt brn, granular, NS

Lime, lt-med brn, fnxln, soft on crush, sticky chalk clumps

Lime, lt-med brn, fnxln, some vfxln, slightly fossiliferous

Lime, lt-med brn, fnxln, slightly fossiliferous

Lime, lt-med brn, fnxln-granular, NS

Lime, lt-med brn, fnxln, slightly fossiliferous, fossil casts

Lime, lt-med brn, fnxln, sticky chalk clumps, slightly fossiliferous

Lime, lt-med brn, granular, bedded chalk with chalk matrix, sticky chalk clumps in part, few crinoid segments

Shale, black carbonaceous, fissile, blocky

Shale, dove gray, soft sticky clumps

Lime, lt-med brn, fnxln with scattered micro xln chips

Lime, crm-lt brn, fn-micro xln, lithographic in part

Lime, crm-lt brn, fn-micro xln, fusulinids, well cemented, slight bedded chalk in part

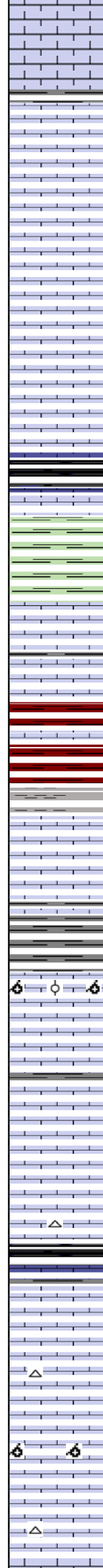
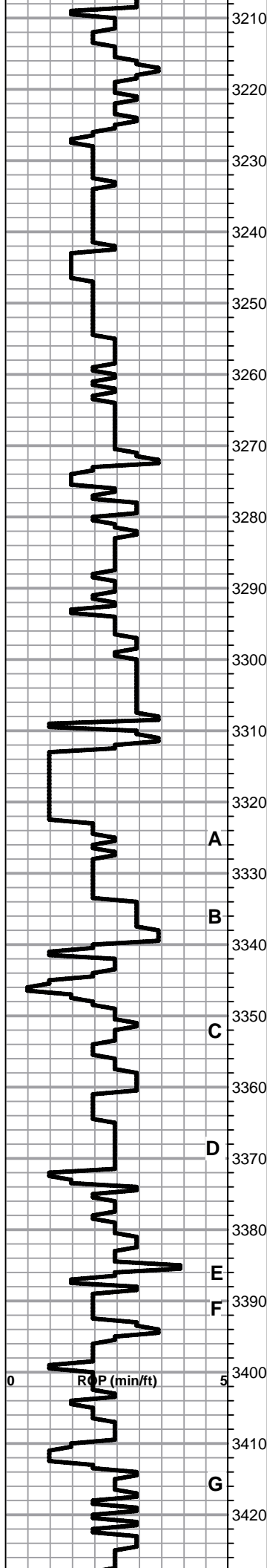
Lime, crm-lt brn, fn-micro xln, fossiliferous, black chert

Lime, crm-lt brn, fn-micro xln

Shale, black carbonaceous, fissile, blocky

Lime, lt brn-lt gray, fnxln, spotty gray mottling, slightly fossiliferous

Lime, crm-lt brn, fnxln-granular, slight bedded chalk in part thin fossil bed. interparticle porositv. spottv stain. v lt odor



Lime, lt-med brn, fnxln

○ Lime, crm-lt brn, mostly fnxln, few chips, granular with fossil fragments, lt scat stain, v lt odor, doesn't appear well developed

Lime, lt brn, fnxln, bedded chalk in part

Lime, lt brn, granular

Lime, crm-lt brn, fn-micro xln, slight bedded chalk

Lime, lt brn-lt grayish brn near shale boundary, fnxln

HEEBNER SHALE 3271-1234

Shale, black carbonaceous, fissile, blocky
 Lime, med brn, fnxln, hard on crush
 Shale, lime green soft mud - dove gray , soft sticky clumps

TORONTO 3292-1255

Lime, white-crm, fnxln, bedded chalk, NS
 Lime, white-crm grading into med brn-gray near shale boundary, fnxln bedded chalk, NS

Shale, lt red wash, soft blocky with lt gray soft blocky in part

LKC 3322-1285

Lime, lt brn-lt grayish brn, fnxln, thin fossil beds in part, NS

Lime, lt-med brn, fnxln

Shale lt gray-lime green, soft mud

A

B

C

D

E

F

G

○ Lime, crm-lt brn, fnxln-granular in part, few chips oolitic/oolmoldic with trace of spotty stain, NFO, No Odor

○ Lime, crm-lt brn, fnxln, bedded chalk, few chips with trace of stain in poorly developed lime

Lime, offwhite-crm, fnxln, bedded chalk

Shale, black carbonaceous, fissile, blocky
 Lime, lt brn-lt gray, fnxln

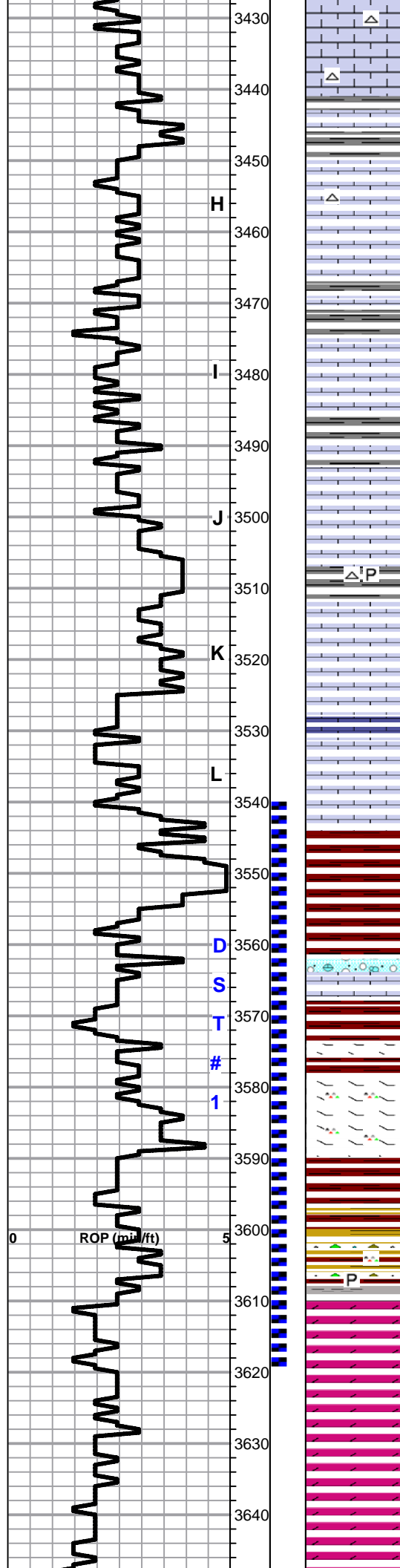
○ Lime, crm, fnxln, trace staining, NFO, very lt odor, appears poorly developed

Lime, crm-lt brn, fnxln, lts of chalk, white chalk wash NS

Lime, crm, fnxln with few oolmoldic chips, barren, NS

Lime, crm, fnxln, slight bedded chalk, white-tan chert

ROP (min/ft)



Lime, crm, fnxln, slight chalk

Lime, lt gray-brn, fnxln
Shale, grayish green, blocky with slivers in part

Lime, crm-tan, fnxln, bedded chalk, NS

Lime, crm-tan, fnxln, bedded chak, NS

Shale, gray-black, soft blocky

Lime, crm-fnxln, bedded chalk, NS

Shale, grayish green, soft blocky
Lime, crm-lt brn, fnxln

Lime, crm-lt brn, fnxln, slightly fossiliferous, NS

Lime, crm-lt brn, fnxln, slight chalk, slightly fossiliferous

Lime, crm-lt brn, fnxln, slight chalk, NS

Lime, crm-lt brn, fn-micro xln,

Lime, crm-lt brn, fnxln, increasing chalk content

BKC 3544-1507

Shale, reddish brn, soft mud-soft blocky, red wash

Shale, reddish brn, maroon, soft blocky

Lime, crm, fnxln, clastic mix in part with red shale stain

Shale, red wash, soft

MARMATON 3579-1542

Lime, crm, fnxln, dolomitic, hard on crush, orange chert

Shale, red wash

Shale, vari color, increasing vari color chert

ARBUCKLE 3610-1573

Dolomite, crm, fn-med xln, granular, lt odor on crush, scattered to sat staining,

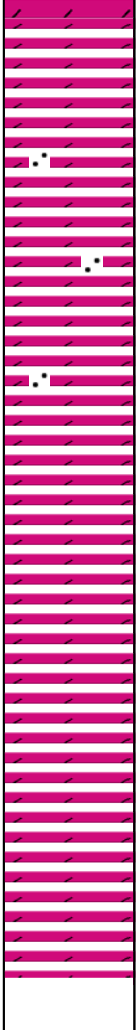
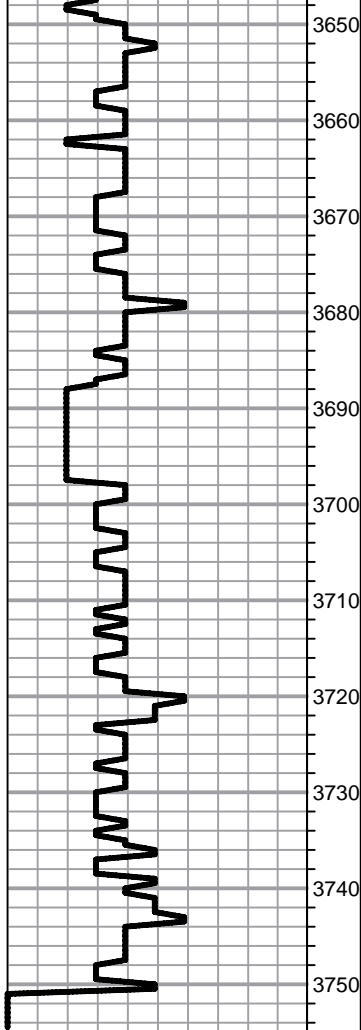
Dolomite, crm-lt brn, granular, lt odor and staining

Dolomite, ivory-crm, fn-cxln, very lt sulfur odor, rhombic xln development increasing with depth

Dolomite, ivory-crm, fn-cxln, gilsonitic in part with increasing barren material

Dolomite, ivory-crm, fn-cxln, granular, gilsonitic in part

DST # 1 STRADDLE TEST
3540' TO 3620' ARBUCKLE
SEE HEADER FOR TEST
SUMMARY



Dolomite, ivory, fn-cxln, granular, lt sulfur odor

Dolomite, ivory, fn-cxln, glauconite specks, increasing sand content

Dolomite, ivory-salmon, fn-cxln, granular

Dolomite, ivory-salmon, fn-med xln, granular

Dolomite, ivory-crm, fn-mdxln, granular

Dolomite, ivory, fn-cxln, granular

Dolomite, crm-ivory, fn-cxln, granular, hard on crush

Dolomite, crm, fn-med xln, granular, hard on crush

Dolomite, crm-ivory, fn-cxln, granular, chalk in part

RTD 3750-1713 LTD 3752-1715

SET 14# 5 1/2" CASING TO
3746' W/ 150 SXS EA2, TOP
STAGE W/ 155 SXS SMD, 30
SXS RATHOLE, 15 SXS
MOUSEHOLE

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 6664

Date	Sec.	Twp.	Range	County	State	On Location	Finish
4-29-13	22	15	18	Ellis	KS		6:15 PM

Location *Hays Muck, 1E, 1/2S, W12*

Lease	Well No.	Owner	
<i>Warren</i>	<i>#1</i>	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.	
Contractor	Type Job	Charge To	
<i>Southwind #1</i>	<i>Surface</i>	<i>TDI, Inc.</i>	
Hole Size	T.D.	Street	
<i>12 1/4</i>	<i>225</i>		
Csg.	Depth	City	
<i>8 5/8</i>	<i>222</i>	State	
Tbg. Size	Depth	The above was done to satisfaction and supervision of owner agent or contractor.	
		Cement Amount Ordered <i>150 sk Common 3% cc 2% gel</i>	
Cement Left in Csg.	Shoe Joint		
<i>20</i>	<i>20</i>		
Meas Line	Displace		
	<i>13</i>		

EQUIPMENT

Pumptrk	No.	Cementer	Common
<i>16</i>		<i>CISCO</i>	<i>150</i>
Bulktrk	No.	Helper	Poz. Mix
<i>1</i>		<i>Lonnie M.</i>	<i>3</i>
Bulktrk	No.	Driver	Gel.
<i>PU</i>		<i>Travis</i>	<i>5</i>

JOB SERVICES & REMARKS

Remarks:	Hulls
<i>Cement did circulate</i>	Salt
Rat Hole	Flowseal
Mouse Hole	Kol-Seal
Centralizers	Mud CLR 48
Baskets	CFL-117 or CD110 CAF 38
D/V or Port Collar	Sand
	Handling <i>158</i>
	Mileage

FLOAT EQUIPMENT

Guide Shoe
Centralizer
Baskets
AFU Inserts
Float Shoe
Latch Down

Pumptrk Charge *Surface*
Mileage *13*

Signature <i>Reby</i>	Tax
	Discount
	Total Charge

JOB LOG

SWIFT Services, Inc.

DATE 5-5-13 PAGE NO. 1

CUSTOMER T D I WELL NO. #1 LEASE Warren JOB TYPE hoisting 2-stage TICKET NO. 23990

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	2330							5-4-13 on loc w/FE
								RTD 3750'
								5 1/2 x 14 # x 3746' x 42
								Cent 1, 3, 5, 8, 9, 11, 13, 91, 61
								Bank 3, 15, 62, 68
								D.V. 62 @ 1152'
	0215							ST FE
	0400							Break Circ.
	0510	5	0			200		start Pre-flushes 500 gal Mud flush 20 bbl KCL flush
	0516	5	32/0			200		start 150 sk EA-2 cent.
	0523		36					End Cement Wash P&L
								Drop LD Plug
	0529	6	0			150		start Displacement
	0539	5	1.2			200		Catch Cement KCL in last 20 bbl
	0545		90.5			600/300		Land Plug Release Pressure Float Hold
								Drop Opening Plug
	0530	2.5	7/5					Plug RH & MH 30/15 sks SMD
	0555	1.75				1100		Open DV
	0556	5	0			150		start 155 sks SMD
	0618		100					End Cement Drop Closing Plug
	0623	5	0			150		start Displacement
		4	0			150		Circ Cement
	0630		28			400/1400		Land Plug Release Pressure DV Closed
								c 11 c 40 sks to pit
								Thank you Nick, David E. &

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802



Phone: 316-337-6200
Fax: 316-337-6211
<http://kcc.ks.gov/>

Mark Sievers, Chairman
Thomas E. Wright, Commissioner
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

June 25, 2013

Tom Denning
TDI, Inc.
1310 BISON RD
HAYS, KS 67601-9696

Re: ACO1
API 15-051-26501-00-00
Warren 1
NE/4 Sec.22-15S-18W
Ellis County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Tom Denning